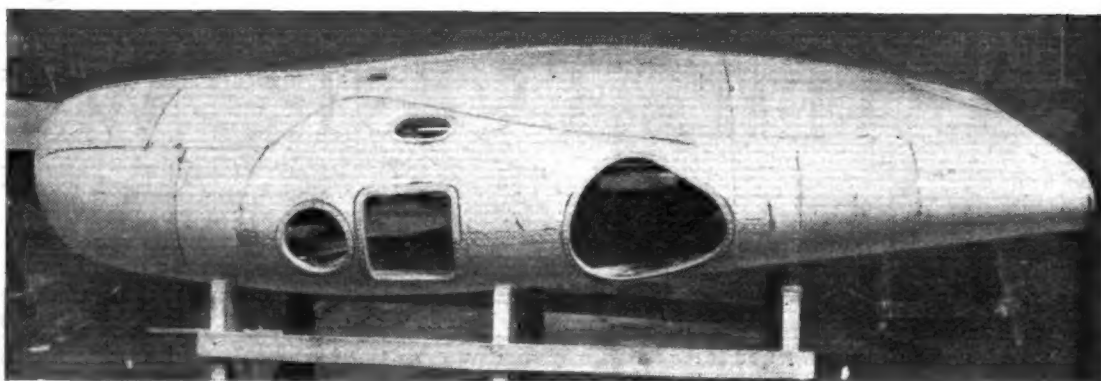


A Scapa engine nacelle. In this view the nacelle has been placed on its side in order to show the inspection doors in the floor by which engineers reach the engines. The nacelle is of all-metal construction.



Several advantages are gained by this very ingenious spar construction. As the spar is "open" from both sides, the riveting, holding-up, etc., becomes very easy.

The sections are simple to form on rolling mill and draw-bench, the web by pressing, and finally the attachment of ribs and drag bracing can be very simply carried out.

It is obvious that the type of spar web used is not by itself able to resist any very considerable vertical loads without collapsing. On the side of the spar where the spar flanges are attached to the web, the necessary strength in a vertical direction is obtained by the angle strips used to attach and reinforce the ribs. On the "open" side, similar stiffening is introduced, and where local loads demand stiffeners in between rib locations, these take

the form of simple channel section struts, riveted to the spar flange.

The wing ribs are mostly of duralumin tube construction, but some of the heavier ribs, such as those which form compression ribs, or which carry bomb loads, tanks, etc., have channel section flanges with channel section ties.

The gross weight of the Scapa is approximately 7½ tons, and the wing span is 75ft.; the wing area is 1,300 sq. ft.

Numbers of these machines have now been in service for some time, and the manufacturers state that neither compulsory nor voluntary modifications have had to be made.

BOMBS and BIRDS: A DEPUTATION

VISCOUNT SWINTON, Secretary of State for Air, accompanied by Sir Philip Sassoon, Under-Secretary of State, the Duke of Northumberland, Parliamentary Private Secretary, and senior officials of the Air Ministry and Ministry of Agriculture and Fisheries, last week received representatives of the various national and local bodies interested in the proposal to establish an armament training camp and range on the Northumbrian coast (see leading article in last week's issue of *Flight*).

The Secretary of State reminded the meeting that the Air Ministry had originally chosen a site at Druridge Bay which was eminently suitable for the purpose from the service point of view, but that as a result of a suggestion made by local interests an alternative locality near Holy Island had been investigated. He was extremely anxious to come to a right decision in this matter, and he had therefore called together the interests who were concerned with either area. Whichever of the sites was chosen there would be no bombing practice with live bombs, and training would be confined to machine-gun firing and the dropping of practice bombs which contained no explosive.

The deputation was introduced by Sir Charles Trevelyan, Lord Lieutenant of Northumberland.

The majority of representatives strongly emphasised the national and local objections to a range being established in the neighbourhood of Holy Island in view of its ancient religious and historical associations, and of the fact that the Farne Islands were one of the most notable bird sanctuaries in this country or in Europe. Representations in regard to

the Druridge Bay area were primarily concerned with the effect on the local fishing industry, including salmon fishing. It was urged that a number of fishermen would inevitably be displaced.

Viscount Swinton, in replying to the deputation, stated that, having heard all the representations and considered all the relevant facts, he had definitely come to the conclusion that he ought to adhere to the original choice of the Ministry and establish the range at Druridge Bay. The arguments which had been advanced against the Holy Island site were, in his opinion, convincing. Moreover, as he had previously mentioned, the Druridge site had great advantages from an Air Ministry point of view. He would, however, investigate what could be done in the interests of the local fishing industry.

The deputation withdrew after Sir Charles Trevelyan had thanked the Secretary of State.

For Aerodrome Owners Abroad

FEELING that it can be of assistance to aerodrome owners abroad, and particularly in the British Empire, the Aerodrome Owners' Association has decided to open associate membership to owners of aerodromes throughout the Empire and in foreign countries.

The associate membership fee for such owners has been fixed at £2 2s. per annum. Full details are obtainable from the Secretary, Mr. H. R. Gillman, Aerodrome Owners' Association, 32, Savile Row, London, W.1.

Forthcoming Events

- Mar. 5. R.Ae.S. Students' Section Lecture: "Airflow Experiments," by W. S. Coleman, 7 p.m., R.Ae.S. Library.
- Mar. 6. Leicestershire Aero Club: Dinner and Ball, Grand Hotel, Leicester.
- Mar. 10. Royal United Service Institution Lecture: "The Development of Civil Aviation," by Lt. Col. F. C. Sheldermine, at 3 p.m.
- Mar. 19. R.Ae.S. (Coventry Section) Lecture: "Type-Testing and Aircraft" by Flt. Lt. Bulman, 8 p.m., Armstrong Siddeley Canteen.
- Mar. 19. R.Ae.S. Students' Section Lecture: "The Monoplane Solution," by R. C. Abel, 7 p.m., R.Ae.S. Library.
- Mar. 20-22. Re-union of Halton Belgium Tour parties, High Leigh, Hoddesdon, Herts.
- Mar. 23. R.Ae.S. Lecture: "Welding," by R. H. Dobson, Institution of Electrical Engineers, 6.30 p.m.
- Mar. 26-29. Yorkshire Gliding Club: Members' Meeting.
- Mar. 31. R.Ae.S. Students' Section Lecture: "The Test Pilot's Job," by K. G. Seth-Smith, 7 p.m., R.Ae.S. Library.
- April 16. R.Ae.S. (Coventry Section) Lecture: "Aircraft Instruments," by Mr. J. E. Chorlton, 8 p.m., Armstrong Siddeley Canteen.

- April 17. Norfolk and Norwich Aero Club: Annual Dinner and Dance.
- April 20. "New Light on Strength of Materials Afforded by Modern Physics," by Dr. H. J. Gough. Institution of Electrical Engineers, 6.30 p.m.
- April 24. Bristol and Wessex Aeroplane Club: Annual Ball.
- April 28. R.Ae.S. Students' Section Lecture: "Application of Aerodynamics to Mechanical Engineering," by J. L. B. Jones, 7 p.m., R.Ae.S. Library.
- May 15-18. Yorkshire Gliding Club: Open Meeting and Competitions.
- May 15-June 1. Stockholm Aero Show.
- May 23. Empire Air Day.
- May 27-June 4. Austrian Aero Club: Whitsun Tour.
- June 6. R.A.F. Flying Club: Annual Display.
- June 6-14. Czechoslovakia Aero Club: Tour.
- June 20. Brooklands Flying Club: "At Home."
- June 27. Royal Air Force Display, Hendon.
- July 10 and 11. King's Cup Race.
- August 1-2. Yorkshire Gliding Club: Open Meeting.
- August 15-30. Yorkshire Gliding Club: Open Meeting and Competitions.
- September 5-6. Aero Club of Hungary: Week-end Aerien.
- Nov. 13-29. Fifteenth International Aero Exhibition, Paris.